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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,634	04/27/2001	Kazumi Fujii	Q64245	8848

7590 10/01/2002

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[REDACTED] EXAMINER

SHIPSIDES, GEOFFREY P

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 10/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk - 7

Office Action Summary	Application No.	Applicant(s)
	09/842,634	
	Examiner	Art Unit
	Geoffrey P. Shipsides	1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 July 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 9-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 9-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12, 13, and 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 12 and 13 now include the limitation of both a radial part with opposed radial surfaces and boss parts. Neither radial parts nor opposed radial surfaces are described in the original disclosure, and thus constitute new matter. Claim 16 recites, "wherein said groove has a length approximately equal to a diameter of said wire." There is no support for this in the original disclosure. Removal of the New Matter is required.

3. Claims 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how the disc could have radial parts, opposed radial surfaces, and boss parts. The specification does not describe a configuration of the discs having radial parts, opposed radial surface, and boss parts. Correction and/or clarification are required.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9, 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12 and 13 have both been amended to recite the presence of "a radial part" and "opposed radial surface. Both claims also still recite the presence of a "boss part". These claims are generally unclear in the description of the disc part and should be revised to more clearly describe the shape of the disc. Appropriate corrective action is required.

The claim language of claim 9 is generally unclear. Both the material forming the cover layer and the material forming the disc are termed "synthetic resin" (lines 4 and 8). Line 8 recites, "causing synthetic resin to flow into the groove-like part to form a protrusion on the disc to fixedly mount it on the cable" which is unclear. It is unclear if the synthetic resin is the first synthetic resin for forming the cover layer or if it is the synthetic resin forming the disc.

Claim 14 recites the limitation "said groove" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "said groove" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said groove" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said groove" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said radial part" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said boss part" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Application EP-0767116-A2 (Pedersen).

Pederson teaches a method of producing a conduit scraping conveyor for conveying food to a plurality of feeding places in a stable (Abstract, lines 1-2). This conduit scraping conveyor consists of a cable having discs disposed thereon in a predetermined spacing relation (Figure 1; Abstract, lines 3-5). Pederson teaches a method of forming this conduit scraping conveyor by injection molding flight discs directly onto the steel cable and molding an elastic coating layer between neighboring flights on to the cable (Abstract, lines 14-25; Figure 1). Pederson teaches that polypropylene or polyamide based elastomers could be used to coat the cable (Column 3, lines 3-7) which constitute synthetic resins. Pederson teaches that polypropylene or polyamide can be used to produce the flights (Column 3, lines 3-7), which constitute synthetic resins. Pederson teaches a method of first forming the flights (disks) that include sockets (flange or boss parts) on to the cable followed by forming the cable coating between the flights and also on to the sockets (Figure 1). The socket part of the flight has protrusions that secure good fixation of the ends of these protrusions and the wire coating (Column 3, lines 39-42). As can be seen if Figure 1, in between these protrusions are depressions in the sockets and the material forming the cable coating forms corresponding protrusions that depressions that fit with the protrusions and depressions on the socket part (Figure 1).

Even if Pederson does not teach that the cable coating is formed against the radial extending surface of flight, it would have been obvious to one having ordinary skill in the art at the time of invention to further extend the cable coating along the socket up to the radial extending surface of the flight to provide additional protection against the

possible exposure of the steel cable. It is further noted that even if Pederson teaches a socket with a configuration that does not exactly meet the configuration as claimed, it would have been obvious to use any socket configuration.

9. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application EP-0767116-A2 (Pedersen) in view of U.S. Patent No. 3,992,503 (Henfrey et al.).

The discussion of Pedersen as applied to claims 12 and 13 above applies herein.

With regard to claims 10 and 11, Pedersen also teaches that the solution of forming flights and cable coating out of the same material in an injection molding technique has been examined but dropped due to the lack of a material that could fulfill both the requirements for sties for the flights and the flexibility for the coating parts (Column 2, lines 21-28). Although Pedersen teaches away from the use of a single material as such, Pedersen does by this teaching teach that such a solution to the given problem has been anticipated in the prior art. Pedersen does not specifically teach how such a solution is directly carried out, however, Henfrey et al. teaches a method of injection molding pipe (title) that has outer ridges against an inner mold part (Figure 2) by sequentially moving previously molded sections into engagement with the mold such that the formed part forms a closure for the mold cavity (Abstract, Figure 2) such that the next section of pipe could be injection molded). Henfrey et al. also teaches a "stepped diameter as at 14" (Column 3, line 20) to improve the connective strength between sections of pipe formed (Figure 2); this structure constitutes a fitting hole. It is further well known in the art at the time of invention that molded articles may be bi-

injection molded to form integral articles in a single molding operation with different portions of different properties. It would have been obvious to one having ordinary skill in the art at the time of invention to create a conduit scraping conveyor as taught by Pederson by a method of forming an indefinite length article with ridges by injection molding as taught by Henfrey et al. in order to facilitate the molding process by reducing the number of molding steps. It would have been further obvious to one having ordinary skill in the art at the time of invention to use a suitable material that meets both the flexibility and rigidness required for the cable coating and the flights respectively as taught by Pederson if such a material is found to exist in order to simplify the molding process of such a product. It would have been further obvious to one having ordinary skill in the art at the time of invention to use the well known method of bi-injection molding of different materials into a single molding cavity such as one taught by Henfrey et al. in a single molding operation to produce the conduit scraping conveyor as taught by Pederson with a flight directly connected to that cable of a rigid material and a cable coating of a flexible material in a continuous operation as taught by Henfrey et al. directly on to a cable as taught by Pedersen in order to speed up production by reducing the number of molding steps. It would have been further obvious to one having ordinary skill in the art at the time of invention to incorporate the use of fitting holes as taught by Henfrey et al. into the molding steps in order to produce a better connection between sequentially molded parts of the conduit scraping conveyor molded in the method as taught by Henfrey et al. It would have been further obvious to one having ordinary skill in the art at the time of invention to mold the sequentially molded

parts directly onto a cable as taught by Pedersen instead of against an inner mold part as taught by Henfrey et al. so as to have the molded part molded directly against the cable as taught by Pedersen and it would have been obvious for one having ordinary skill in the art to do this in order to create the integral connection between the coating, flights, and cable as taught by Pedersen. It would have been further obvious to one having ordinary skill in the art at the time of invention that a cable could have and would have been substituted for the core mold part as taught by Henfrey et al. in order to achieve the desired results as discussed above because a cable constitutes the same cross sectional shape as the core member as taught by Henfrey et al.

Allowable Subject Matter

10. Claims 9 and 14-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, first and second paragraph, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach nor render obvious the formation of a disc cable for traveling within piping by forming a cover layer with groove-like parts over a metal wire followed by the molding of discs over the groove-like parts with the material forming the disc flowing into the groove-like parts to fixedly mount the discs onto the cable.

Responses to Arguments

12. Applicant's arguments filed 7-17-02 have been fully considered but they are not fully persuasive. The rejection of claim 9 has been withdrawn and claims 9 and 14-17 are indicated allowable.

With regard to Applicant's arguments with regard to claims 12 and 13, it is the examiner's position that the cable coating (3) of Pedersen goes substantially up to the perpendicular surface of the flight (Figure 1). But even if Pedersen's cable coating does not go all the way up to the perpendicular surface of the flight, it is the examiner's position that it would have been an obvious modification of Pedersen to slightly extend the length of the cable coating up to the perpendicular surface of the flight in order to provide even more protection against the exposure of the steel cable.

With regard to Applicant's arguments with regard to claims 10 and 11, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In particular, it is the examiner's position that Henfrey et al. is merely teaching a generally well-known method of forming indefinite length articles of non-constant cross-sectional shape through injection molding. Pedersen teaches in prior art process that both the cable

coating and the flight have been integral and of the same material, but Pedersen does not specifically teach how this was constructed in prior art processes.

It would have been obvious to one having ordinary skill in the art (in view of Pedersen and Henfrey et al.) that the projections of the prior art process of making disc cables as taught by Pedersen could and would have been produced by the method as taught by Henfrey et al. in order to speed up the molding process by reducing the number of molding steps.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one having ordinary skill in the art, that wants to produce a cheaper disc cable out of a single material (as taught by Pedersen) would look for a method for producing indefinite length articles of a non-constant but repeating cross-sectional shape and would have looked to Henfrey et al. as a method to perform such an operation in a time efficient manner.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey P. Shipsides whose telephone number is 703-306-0311. The examiner can normally be reached on Monday - Friday 9 AM till 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan H Silbaugh can be reached on 703-308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Geoffrey P. Shipsides/gps
September 27, 2002


JAN H. SILBAUGH
SUPERVISORY PATENT EXAMINER
ART UNIT 1732
